

## ABSTRACT

A dynamo-electric machine has a stator with a primary winding and a rotor with a field magnet and a shaft. the field magnet includes a first field magnet having diferent polarity magnetic poles sequentially  
5 arranged in a rotation direction and a second field magnet having diferent polarity magnetic poles sequentially arranged in a rotation direction. The machine further has a mechanism for shifting the first and the second field magnets in axial and rotation directions.